

DEPARTMENT OF TRANSPORTATION**Research and Special Programs Administration****49 CFR Parts 171, 172, and 174****[Docket No. HM-180, Notice No. 86-1]****Placarding Tank Cars Which Contain Hazardous Material Residue****AGENCY:** Research and Special Programs Administration, DOT.**ACTION:** Notice of proposed rulemaking; disposition of petitions for reconsideration.

SUMMARY: The Research and Special Programs Administration (RSPA) recently published amendments to the Department of Transportation's Hazardous Materials Regulations (HMR) changing the placarding and shipping paper requirements for tank cars which contain the residues of hazardous materials. The amendments, which contained a quantitative definition for "residue" were promulgated in a final rule issued under Docket HM-180, which was published on September 26, 1985 (50 FR 39005). Eight petitions for reconsideration were filed in connection with these amendments. This notice requests comments regarding the changes which the RSPA is proposing in response to these petitions, as well as a change that relates to another recent amendment (Docket HM-196; 50 FR 41092, October 8, 1985).

DATE: Comments must be received on or before April 22, 1986.

ADDRESS: Address comments to: Dockets Branch, Office of Hazardous Materials Transportation (DHM-53), U.S. Department of Transportation, Washington, DC 20590. Comments should be submitted, when possible, in five copies. The Dockets Branch is located in Room 8426 of the Nassif Building, 400 Seventh Street, SW, Washington, DC. Office hours are 8:30 a.m. to 5:00 p.m., Monday through Friday.

FOR FURTHER INFORMATION CONTACT: Lee Jackson, Standards Division, Office of Hazardous Materials Transportation, Department of Transportation, 400 Seventh Street, SW., Washington, DC 20590. Telephone: (202) 426-2075.

SUPPLEMENTARY INFORMATION:**I. Background**

On September 26, 1985, the RSPA published a final rule [Docket HM-180; 50 FR 39005], which concerned the placarding of empty tank cars. In the final rule, RSPA changed the placarding and shipping paper requirements for tank cars that contain residues of

hazardous materials. Also contained in the final rule was a quantitative definition for the word "residue."

In response to the final rule, RSPA received eight petitions for reconsideration under 49 CFR 106.35. Each of the petitioners objected to the definition of residue which was contained in the final rule. Specifically, concern was expressed about that portion of the definition which states:

"Residue of a hazardous material, as applied to the contents of a tank car (other than DOT Specification 106 or 110 tank cars), means a quantity of material not greater than 3 percent of the car's marked volumetric capacity."

One of the petitioners, Shell Oil Company, requested that RSPA reconsider the quantitative wording of the residue definition. Shell, as well as the other petitioners, contend that the public was given no opportunity to comment on the residue definition and that it is not operationally possible to comply with the definition. Commenters state that there is no accurate method of determining exactly how much material remains in a tank car after unloading.

Although the RSPA does not necessarily agree with certain of the factual statements made in the petition submitted by Shell, we believe their comments on the final rule concerning the residue definition represent a consensus of the concerns expressed by the other petitioners. For this reason, the substantive points of the Shell petition are quoted as follows:

"There is no practical method of determining precisely how much material remains in a tank car after unloading, considering tank car design and the limitations of facilities at many unloading locations.

Some gauging tapes are designed to gauge the liquid level at the top of the car rather than at the bottom.

Devices used in pressure cars don't reach to the bottom of the car and therefore can't measure the remaining liquid which may be more or less than 3% depending on the pumping effort expended.

Some receivers unload butane and other compressed gases by heating a small amount of the liquid and pumping the resulting vapor through the vapor line to force out the liquefied gas. The remaining vapors occupy 100% of the marked volumetric capacity of the car. Although for all practical purposes, the car contains only the residue of a hazardous material, it does not meet the definition in Section 171.8 and presumably would be considered a loaded car.

Viscous liquids such as resins and regulated asphalts also present a problem since there is no accurate method of measuring the clingage on the tank walls.

Weighing cars before they leave the unloading location is not a viable alternative since most facilities don't have track scales.

Installing scales at all locations receiving hazardous material tank cars would be prohibitively expensive. Moving a car from the unloading point to a railroad scale to determine its status could result in a violation, if for example, a car displayed residue placards and the scale weight indicated it contained more than 3% of the volumetric capacity. The additional switching would also be costly in terms of time and money.

The definition of what constitutes an empty car does not enhance safety but merely increases the potential for unintentional violations of the regulations. The 3% measure is basically an economic issue and is already covered in Rule 35 of the Uniform Freight Classification.

There is no need for a specific percentage figure to be included in the residue definition since fire fighters would follow the same procedure regardless of the exact amount of the residue. Shell suggests the following definition be added to § 171.8 in lieu of the one in the final rule.

"Residue means the hazardous material remaining in a packaging, including a tank car, after its contents have been emptied and before the packaging is refilled or cleaned and purged of vapor to remove any potential hazard."

II. Response to Comments

In response to the petitions, the RSPA proposes to redefine "residue" by limiting it to liquids (excluding vapor and gases) and expanding the quantitative limitation from 3% to 4% with a tolerance of plus or minus one percent in order to provide shippers greater flexibility in their determination of compliance with the rule. The RSPA is taking this action because of the problems that may be encountered in accurately determining the amount of residue which remains in an unloaded tank car. Aside from weighing the car, which may be impractical because most unloading facilities don't have track scales, there appears to be no accurate method of measuring the precise amount of residue which remains in a tank car. However, RSPA believes that a quantitative requirement must be adopted in order to make the rule effective.

The public is invited to submit any substantive comments or information which they may have concerning the "residue" definition proposed in this notice. Comments should, as a minimum, address the maximum amount of residue which, from a safety standpoint, could be left in a tank car which is placarded with the RESIDUE placard.

In addition to the petitions addressed to the definition of residue, the RSPA also received comments stating that it was inconsistent and confusing to require a COMBUSTIBLE placard to

remain on a tank car which only contains the residue of a combustible liquid. Currently, tank cars which contain residue of hazardous material may be placarded with the appropriate RESIDUE placards.

The only exception to this is for tank cars which contain combustible liquid residue. These cars must continue to display the COMBUSTIBLE placard. Upon further consideration of this point, the RSPA agrees that this is inconsistent and may cause confusion. For this reason, the RSPA believes that a RESIDUE placard should be required on tank cars which contain combustible liquid residues. Therefore, the RSPA proposes to remove the second sentence in footnote 4 to Table 2 of § 172.504 and paragraph (c) of § 172.510. Revision to both of these sections is necessary to require the display of a RESIDUE placard on a tank car which contains residue of a combustible liquid. Further, RSPA proposes to revise § 172.525 to require the lower triangle of the combustible RESIDUE placard to be white and to require word "RESIDUE" to be black on this same placard. This change is necessary to identify those tank cars which contain combustible residue so they are not subjected to the train placement requirements. In addition, it is proposed to reinstate the first sentence of footnote 4 to Table 2 of § 172.504 as it appeared prior to Amendment No. 172-98(50 FR 39005).

For clarification, the RSPA proposes to revise paragraph (c) of § 172.334. This revision was inadvertently omitted from Docket HM-196, the final rule that addressed the *Packaging and Placarding Requirements for Liquids Toxic by Inhalation*. This revision would prohibit the display of identification numbers on subsidiary placards such as the POISON placard required by § 172.505. The RSPA proposes to revise § 172.525 to authorize the display of identification numbers on the RESIDUE placard or orange panel in accordance with the marking requirements contained in Subpart D of Part 172. The RSPA also proposes to revise the Table in paragraph (a)(2) of § 174.25 to clarify the shipping paper requirements for tank cars which contain combustible liquids.

Editorially, the RSPA proposes to amend § 172.525(a)(2) to include a reference to § 172.544 so there is a citation in this section which refers to the RESIDUE placard for combustible liquids. Further, the RSPA proposes to amend paragraph (c) of § 174.25 to clarify exactly when the letters "RQ" must be entered on the shipping paper and to remove the combustible liquid

exception from the description requirements.

Also, § 174.93 would be amended to except tank cars which contain combustible liquid residue from the train placement requirements. This is consistent with the provision for loaded tank cars which contain Combustible liquids. In the case of a tank car which contains the residue of a hazardous material, the letters "RQ" are required to be shown on the shipping paper when the quantity of the residue is equal to or exceeds the reportable quantity level and the residue or a constituent of the residue is a hazardous substance. Comments are requested on the changes proposed to §§ 172.334, § 172.504, § 172.510, § 172.525, § 174.25 and § 174.93.

The RSPA is also interested in receiving comments on the placarding requirements for tank cars which carry residues of materials which exhibit inhalation toxicity. After April 30, 1986 tank cars loaded with these materials are required to display POISON placards as well as the placards required in § 172.504. When the tank car is unloaded, each of these placards would have to be changed to RESIDUE placards. The RSPA is interested in receiving suggestions on optional placarding methods that could be employed when placarding tank cars which contain residue of materials which exhibit inhalation toxicity.

III. Review by Sections

1. It is proposed to revise § 171.8 by expanding the quantitative limits of the "residue" definition and to restrict the application of the definition to liquids.

2. It is proposed to revise paragraph (c) of § 172.334 to prohibit the display of an identification number marking on a subsidiary placard.

3. It is proposed to reinstate the first sentence of footnote 4 to Table 2 of § 172.504 as it appeared prior to Amendment No. 172-98 and to remove the second sentence which prohibits a RESIDUE (EMPTY) placard on a tank car containing Combustible liquid.

4. It is proposed to revise paragraph (c) of § 172.510 by removing the prohibition against using a RESIDUE placard for combustible liquid residues.

5. It is proposed to revise § 172.525 so a reference to the RESIDUE placard for combustible liquids is shown.

6. It is proposed to revise § 172.525 to require the lower triangle of the RESIDUE placard for combustible liquid residues to be white and to require the word "RESIDUE" to be black on the combustible liquid RESIDUE placard.

7. It is also proposed to revise § 172.525 to authorize identification

numbers to be displayed on RESIDUE placards or on orange panels in association with RESIDUE placards.

8. It is proposed to revise § 174.25 for clarification.

9. It is proposed to revise § 174.93 to except tank cars which contain combustible liquid residue from train placement requirements.

IV. Administrative Notice

A. Executive Order 12291

The effect of this rule, as proposed, does not meet criteria specified in section 1(b) of Executive Order 12291 and is, therefore, not a major rule. This rule is not considered to be a significant rule under the regulatory procedures of the Department of Transportation (44 FR 11034). This proposed rule does not require a Regulatory Impact Analysis, or an environmental impact statement under the National Environmental Policy Act (42 U.S.C. 4321 et seq.) The economic impact of this document has been found to be so minimal that further evaluation is unnecessary.

B. Impact on Small Entities

Based on limited information concerning the size and nature of entities likely affected by this proposed rule, I certify this proposal will not, if promulgated, have a significant economic impact on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects

49 CFR Part 171

Hazardous materials transportation, Definitions.

49 CFR Part 172

Hazardous materials transportation, Placarding.

49 CFR Part 174

Hazardous materials transportation, Railroad safety.

Rules and Regulations

In consideration of the foregoing, it is proposed to amend Parts 171, 172 and 174 of Title 49 of the Code of Federal Regulations as follows:

PART 171—GENERAL INFORMATION, REGULATIONS AND DEFINITIONS

1. The authority citation for Part 171 continues to read as follows:

Authority: 49 U.S.C. 1803, 1804, 1808; 49 CFR Part 1, unless otherwise noted.

2. Section 171.8 would be amended by the addition in, its correct alphabetic sequence, the following definition.

§ 171.8 Definition and abbreviations.

"Residue" means the hazardous material remaining in a packaging after its contents have been emptied to the maximum extent practicable and before the packaging is refilled, or cleaned of hazardous material and purged of vapor to remove any hazard. Residue of a hazardous material, as applied to the contents of a tank car (other than DOT Specification 106, 107 and 110 tank car tanks), means a quantity of material not exceeding 4% (plus or minus one percent) of the cars marked volumetric capacity and applies only to the liquid phase of the material in the tank car.

PART 172—HAZARDOUS MATERIALS TABLES AND HAZARDOUS MATERIALS COMMUNICATIONS REGULATIONS

3. The authority citation for Part 172 continues to read as follows:

Authority: 49 U.S.C. 1803, 1804; 49 CFR Part 1, unless otherwise noted

4. In § 172.334, paragraph (c) would be revised as follows:

§ 172.334 Identification numbers; prohibited display.

(c) Except as required by § 172.332(c)(4) for a combustible liquid, the identification number of a material may be displaced only on the placards required for the material by § 172.504.

5. In § 172.504, Footnote 4 to Table 2 would be revised to read as follows:

§ 172.504 General placarding requirements.

Table 2

4. A FLAMMABLE placard may be used on a cargo tank or portable tank during transportation by highway, rail or water, and on a compartmented tank car containing materials classed as Flammable liquid and Combustible liquid.

6. In § 172.510, paragraph (c)(1) is removed and paragraphs (c)(2) and (c)(3) are redesignated as (c)(1) and (c)(2) and are revised to read as follows:

§ 172.510 Special placarding provisions: Rail.

(c) * * *

(1) Is reloaded with a material requiring no placards or different placards; or

(2) Is sufficiently cleaned of residue and purged of vapor to remove any potential hazard.

7. In § 172.525, paragraph (a) would be revised to read as follows:

§ 172.525 Standard requirements for the RESIDUE placard.

(a) Each RESIDUE placard must be as follows:

(1) Except as provided in paragraph (a)(3) of this section, the lower triangle of the RESIDUE placard must be black and the word "RESIDUE" must be in white letters approximately 1½ inches (40 mm) high made with approximately ¼ inch (6 mm) of an inch stroke.

(2) Except for the POISON GAS, RADIOACTIVE or EXPLOSIVES placard, the RESIDUE placard may be used to display the appropriate identification number in accordance with the provisions of Subpart D of this part.

(3) For a combustible liquid residue, the lower triangle of the RESIDUE placard must be white with the word "RESIDUE" in black letters.

(4) Otherwise, the RESIDUE placard must be as specified in § 172.519 and Appendix B to this Part, and §§ 172.528, 172.530, 172.532, 172.536, 171.540, 172.542, 172.544, 172.546, 172.548, 172.550, 172.552, 172.554, or 172.558, as appropriate for the residue of the hazardous material being transported and required by this subchapter to be placarded. No other placard may be used as a RESIDUE placard.

PART 174—CARRIAGE BY RAIL

8. The authority citation for Part 174 continues to read as follows:

Authority: 49 U.S.C. 1803, 1804, 1808; 49 CFR Part 1, unless otherwise noted.

9. In 174.25, the last entry in the table which follows paragraph (a)(2)(ii) is deleted and the following two entries are added to the end of the Table, and paragraph (c) of this section is revised, as follows:

§ 174.25 Additional information on waybills, switching orders and other billings.

(a) * * *

Hazardous material or class	Placard notation	Placard endorsement
Tank cars which contain a residue of a hazardous material other than a combustible liquid.	See sec. 174.25(c)	Dangerous
Tank cars which contain a residue of a combustible liquid.	See sec. 174.25(c)	None.

(c) For a tank car that contains only the residue of a hazardous material, the shipping papers must contain the words "RESIDUE: Last Contained * * *", followed by the basic description of the hazardous material last contained in the tank car and the placard notation specified in the second column of the table in paragraph (a)(2) of this section followed by the word RESIDUE. For example, "RESIDUE: Last Contained Petroleum Naptha, Combustible liquid, UN 1255, Placarded: COMBUSTIBLE—RESIDUE". For a tank car that contains a residue that is a hazardous substance, the letters "RQ" must also be entered on the shipping paper either before or after the basis description.

10. In 174.93, the text would be revised to read as follows:

§ 174.93 Position in train of a tank car displaying RESIDUE placards.

Except for a tank car placarded COMBUSTIBLE—RESIDUE, a tank car displaying RESIDUE placards in a

moving or standing train may not be placed nearer than the second car from an engine or occupied caboose.

Issued in Washington, DC on March 11, 1986, under the authority delegated in 49 CFR Part 106, Appendix A.

Alan I. Roberts,
Director, Office of Hazardous Materials Transportation.

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